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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,047	05/11/2006	Hidehiro Toyoda	G&P-5304	6271
24956 7590 09/24/2008 MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C. 1800 DIAGONAL ROAD SUITE 370 ALEXANDRIA, VA 22314				
EXAMINER ABRAHAM, ESAW T				
ART UNIT		PAPER NUMBER		
2112				
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09/24/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/579,047

**Applicant(s)**

TOYODA, HIDEHIRO

**Examiner**

ESAW T. ABRAHAM

**Art Unit**

2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 May 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.  
4a) Of the above claim(s) 7-17 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-6 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 11 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-85/86)  
Paper No(s)/Mail Date 06/11/06  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1-6 are presented for examination.

**Election Restriction**

2. Applicant's election without traverse of Group I, claims 1-6 is acknowledged.

**Oath Declaration**

3. The oath/declaration filed on 05/11/06 is acceptable.

**Information Disclosure Statement**

4. The Information Disclosure Statements filed on 05/11/06 have been considered.

**Priority**

5. Acknowledgment is made of applicant's claim for **foreign priority** under 35 U.S.C. 119(a)-(d) which papers have been placed of record in the file.

**Drawings**

6. The formal drawings filed on 05/11/06 are accepted.

***Specification***

**Abstract**

7. Applicant is reminded of the proper language and format for an abstract of the disclosure.  
See MPEP 608.01(b).

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phrasology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title or claim(s). It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract is objected because:

- The abstract of the disclosure is objected to because: the abstract includes a reference number without referring the figure. Please remove the reference number in line 2 of the abstract.

#### **Title**

8. The title of "Data transmission method and data transmission device" is so broad as to not provide any description of the inventive concept to which the claims are directed.

#### **Claim Objections**

9. Claim 1 is objected to because of the following informalities: In line 7, claim 1, the word "through" is misspelled.

Correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakamoto et al. (U.S. PN: 6,557,110) "hereinafter as Sakamoto".

**As per claim 1:**

Sakamoto substantially teaches a data transmission method for transmitting data through a transmission line that is integrated with a plurality of links including a first link group, a second link group, and a third link group, the method comprising transmitting information data through the first link group that comprises at least one link included in the plurality of links (see col. 45-65); transmitting parity data generated from the information data through the second link group that comprises at least one link included in the plurality of links that is different from the first link group (see col. 6, lines 5-50 and col. 7, lines 31-67); and transmitting error check data generated from the information data and the parity data, which is used for an the error correction when an error occurs in the information data or the parity data, through the third link group that

comprises at least one link included in the plurality of links that is different from the first link group and the second link group (see col. 8, lines 18-53).

**As per claim 2:**

Sakamoto in view of the above rejection teaches compensating a difference of arrival time between at least two among the information data, the parity data and the error check data, when the difference of arrival time occurs; and establishing a synchronization of the information data, the parity data and the error check data (see col. 8, lines 53-64).

**As per claim 3:**

Sakamoto in view of the above rejection teaches compensating, when the error correction of the information data or the parity data is performed by using the error check data, the difference of arrival time of the information data, the parity data and the error check data to detect the difference of arrival time, in which the error correction does not continuously occur; and establishing a synchronization of the information data, the parity data and the error check data, using the detected difference of arrival time (see col. 8, lines 53-64)..

**As per claim 4:**

Sakamoto in view of the above rejection teaches judging whether the lost of information data occurs in at least one link included in the first link group, based on the result of comparison of the information data and the parity data; calculating an error rate from the data transmitted by the first link group, the data transmitted by the second link group, and the error check data transmitted by the third link group; and replacing, when a loss of the information data occurs, the

lost information data with the information data reproduced from the parity data, based on the result of a comparison of the error rate and a predetermined value (see col. 8, lines 53-67 to col. 9, lines 1-48, col. 24, lines 56-63 and col. 25, lines 5-14).

**As per claim 5:**

Sakamoto in view of the above rejection teaches calculating an error ratio and an error ratio variation per unit time from the data transmitted by the first link group, the data transmitted by the second link group and the error check data transmitted by the third link group; and replacing the data transmitted by the first link group with the information data reproduced from the parity data when the error rate variation per unit time abruptly increases beyond a predetermined value (see col. 8, lines 53-67 to col. 9, lines 1-48).

**As per claim 6:**

Sakamoto in view of the above rejection teaches generating the information data from a plurality of parallel signals that are composed of a bit string including a plurality of bits; generating the parity data from a signal that is composed of a parity calculated from the bit string; generating the error check data from at least one check signal that is composed of a check bit string generated by using an error correction code obtained from the bit string and the parity; transforming the generated information data, the generated parity data and the generated error check data into a plurality of serial signals; transmitting each of the plurality of serial signals through the first link group the second link group and the third link group (see col. 6, lines 5-50, col. 7, lines 31-67 and col. 8, lines 53-67 to col. 9, lines 1-48); receiving the transmitted plurality of serial signals; converting the received plurality of serial signals into information data, the

parity data and the error check data; detecting the error of the information data and the parity data by using the check bit string included in the error check data; and correcting the error of the information data by using the check bit string when an error is detected in the information data, and correcting the error of the parity data by using the check bit string when an error is detected in the parity data (see col. 23, lines 1-58 and col. 25, lines 14-28).

### **Conclusion**

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Esaw T. Abraham whose telephone number is (571) 272-3812. The examiner can normally be reached on M-F 8am-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques can be reached on (571) 272-6962. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/EA/



Art Unit: 2112

/Esaw T Abraham/

Examiner, Art Unit 2112

09/19/08